REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks.

Claim 1 and claim 32 have been amended to clarify the subject matter of the claims as supported by the specification at page 8, lines 11-17. Accordingly, claims 24-26, 28-29, and 31, which depend from claim 23, have been amended editorially.

Claims 23-32 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi et al. (U.S. Patent No. 6,989,289) in view of Fuchigami et al. (Japanese Patent Application Publication No. 2003/243028). Applicants respectfully traverse this rejection.

Applicants submit herewith a partial translation of Fuchigami (in which emphases are added).

Claim 23 is directed to a solid electrolytic capacitor that includes a positive electrode of a valve metal, a dielectric of an anodized film formed on the valve metal, and a negative electrode including a composite material in contact with the anodized film. Claim 23 recites that the composite material of the negative electrode includes a conductive polymer and an ionic liquid capable of repairing a defect in the anodized film. Generally, there are two types of capacitors in the art, an electrical double layer capacitor and an electrolytic capacitor. Further, the electrolytic capacitor has two basic types, a solid type and liquid type. The subject matter of claim 23 is the solid-type electrolytic capacitor.

Shiraishi discloses a solid type electrolytic capacitor containing an anode layer, a dielectric layer formed on the anode, a polymer having electrical conductivity as a cathode (see abstract and coln. 6, lines 42-62). Shiraishi, however, does not teach an ionic liquid capable of repairing a defect in the anodized film, i.e., the dielectric layer, and this rejection relies on Fuchigami's disclosure of the ionic conductor (see page 3 of the Office Action mailed February 2, 2011).

Fuchigami discloses an electric double-layer capacitor (see para. [0001]) and that the device has an anode, cathode, and ion conductor filled between the electrodes (see paras. [0003] and [0005]). The ion conductor of Fuchigami is a solution of a salt, i.e., an electrolytic solute in a solvent, and the solute can be dissociated into cations and anions when dissolved in the solvent and provide the ionic conductivity (see para. [0004]). In the electric double-layer capacitor, generally a positively charged layer and negatively charged layer are formed within the ion conductor near the corresponding electrodes with the cations and anions of the ion conductor moving to the corresponding electrodes having an opposite charge. In contrast, the solid electrolytic capacitor of claim 23 includes a positive electrode, a dielectric of an anodized film formed on the valve metal, and a negative electrode, and the negative electrode includes a composite material containing a conductive polymer and an ionic liquid. In the solid electrolytic capacitor of claim 23, the dielectric layer is formed between the positive electrode and negative electrode and isolates the electrodes from each other, and the ion conductivity is not provided within the dielectric layer of claim 23. In addition, the material of the dielectric of claim 23, i.e., anodized film, is different from the ion conductor of Fuchigami (see para. [0004]).

Even if the ion conductor of Fuchigami were combined with the electrolytic capacitor of Shiraishi, which Applicants do not concede, the dielectric layer of Shiraishi, which is an anodized layer of the anode and placed between the anode and the conductive polymer, i.e., the cathode (see coln. 6, lines 42-52), could not be replaced with the ion conductor of Fuchigami. In addition, the combination of the references does not teach or suggest that the conductive polymer of Shiraishi could be replaced with the ion conductor of Fuchigami or that the ion conductor of Fuchigami, which is used between the anode and cathode, can be used as the negative electrode together with the conductive polymer as recited in claim 1. Further, in Fuchigami, an anodized film is not formed over the positive electrode, and thus Fuchigami does not have an issue of repairing a defect of the anodized film, which the electrolytic capacitor can suffer (see withstand voltage of examples comparing with comparative examples including no ionic liquid, for example examples 28-44 and comparative example 4 in table 4 on page 59 of the specification). Shiraishi and Fuchigami individually, or a combination thereof does not teach or suggest

repairing a defect of the anodized film by including a material in the capacitor or including an ionic liquid for repairing the defect in the negative electrode as claim 1 recites. Thus, there is no reasonable basis to combine Shiraishi and Fuchigami.

Accordingly, claim 23, and claims 24-31 that ultimately depend from claim 23 are distinguished from Shiraishi in view of Fuchigami.

Claim 32 is directed to a method of improving a withstand voltage of a solid electrolytic capacitor. Similar to claim 23, the solid electrolytic capacitor of claim 32 includes a positive electrode of a valve metal, a dielectric of an anodized film formed on the valve metal, and a negative electrode including a composite material in contact with the anodized film that includes a conductive polymer and an ionic liquid capable of repairing a defect in the anodized film. Thus, for at least the same reasons as discussed for claim 23 above, claim 32 also is distinguished from Shiraishi in view of Fuchigami. Accordingly, this rejection should be withdrawn.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance.

Respectfully submitted,

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